



**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:	)	
	)	
Jiming Sun	)	Examiner: Amr Awad
	)	
Serial No.: 09/722,996	)	Group Art Unit: 2675
	)	
Filed: November 27, 2000	)	Docket: 884.334US1
	)	
Title: RING POINTING DEVICE	)	
Assignee: Intel Corporation	)	

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**APPELLANT'S BRIEF ON APPEAL**

Mail Stop Appeal Brief- Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

This brief is presented in support of the Notice of Appeal filed on February 23, 2005, from the final rejection of pending claims 1-30 of the above-identified patent application. The Office Action from which Appellant appeals was mailed November 2, 2004.

Pursuant to 37 C.F.R. 41.37(a), this Appeal Brief is submitted singly. The Commissioner of Patents and Trademarks is hereby authorized to charge Deposit Account No. 19-0743 in the amount of \$500.00 which represents the requisite fee set forth in 37 C.F.R. § 41.20(b)(2). Appellant respectfully requests reversal of the Examiner's rejection of pending claims 1-30.

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**APPELLANT'S BRIEF ON APPEAL**

Serial Number: 09/722,996

Filing Date: November 27, 2000

Title: RING POINTING DEVICE

Assignee: Intel Corporation

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Serial Number: 09/722,996

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**1. REAL PARTY IN INTEREST**

The real party in interest of the above-captioned patent application is the assignee, Intel Corporation.

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Serial Number: 09/722,996

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**2. RELATED APPEALS AND INTERFERENCES**

Appellant knows of no other appeals or interferences which will have a bearing on the Board's decision in the present appeal.

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**3. STATUS OF THE CLAIMS**

Claims 1-30 have been finally rejected. Claims 1-30 are the subject of the present appeal.

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**4. STATUS OF AMENDMENTS**

Claims 1-30 received a final rejection on November 2, 2004. Appellant proposed that amendments be made to Claim 1. The amendments were entered by the Examiner. No further amendments were made. A Notice of Appeal was filed on February 23, 2005.

## **5. SUMMARY OF CLAIMED SUBJECT MATTER**

This summary is presented in compliance with the requirements of Title 37 C.F.R. § 41.37(c)(1)(v), mandating a “concise explanation of the subject matter defined in each of the independent claims involved in the appeal ...” Nothing contained in this summary is intended to change the specific language of the claims, nor is the language of this summary to be construed to limit the scope of the claims. Furthermore, this summary does not present an exhaustive or exclusive view of the claims (please refer to appended claims and their legal equivalents).

### **Claim 1**

Claim 1 is supported in Figures 1, 3A, and 3B and in the specification *inter alia* at page 3, lines 15-20, page 4, lines 18-19, page 5, lines 19-29, page 6, lines 12-20, and page 10, lines 2-4.

In Figure 3B, a pointing device shows a ring and a sensor unit with sensors in a circular pattern. The specification describes that the sensors can be activated for positioning a pointer on a display screen. The specification also indicates that a controller creates position information based on the activation of one or more of the sensors.

### **Claim 13**

Claim 13 is supported in Figure 5 and in the specification *inter alia* at page 9, lines 22-27, and page 10 lines 1-20.

Figure 5 is a flowchart illustrating a technique for moving a pointer on a display. The technique includes detecting activation of one of a plurality of sensors. The specification indicates that the plurality of sensors are mounted on a ring and arranged in a circular pattern. The specification also indicates that one of the plurality of sensors can be activated for moving the pointer on the display. Figure 5 indicates that position information for the pointer is created. The specification indicates that the position information is created based on which of the plurality of sensors is activated.

**Claim 18**

Claim 18 is supported in Figures 1, 3B, and 5 and in the specification *inter alia* at page 7, lines 14-17, page 9, lines 22-27, and page 10 lines 1-20.

Figure 1 illustrates a computer system used in conjunction with embodiments of the invention. Figure 1 includes a receiver and a transmitter. In Figure 3B, a pointing device shows ring and a sensor unit with sensors in a circular pattern. The specification indicates that the sensors can be activated for positioning a pointer on a display screen. The specification also describes a controller that creates position information based on the activation of one or more of the sensors. The specification indicates that the transmitter is to transmit movement information to the receiver.

**Claim 27**

Claim 27 is supported in Figure 1 and in the specification *inter alia* at page 9, lines 26 and 27; page 10, lines 7, 8, 26, and 27; and page 11, lines 6-10.

The specification describes signal-bearing media with instructions that can be executed by a processor. Figure 5 is a flowchart illustrating a technique for moving a pointer on a display. The technique includes detecting activation of one of a plurality of sensors. The specification indicates that the plurality of sensors are mounted on a ring and arranged in a circular pattern. The specification also indicates that ones of the plurality of sensors can be activated for moving the pointer on the display. Figure 5 indicates that position information for the pointer is created. The specification indicates that the position information is created based on which of the plurality of sensors is activated.



**6. GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

The grounds of rejection to be reviewed are whether claims 1-2, 5-8, 10, 11, 13-19, 21-22, 24-25, 27-28 and 30 are properly rejected under 35 U.S.C. §103(a) as being unpatentable over US Patent No. 5,832,296 to Wang et al. (hereinafter referred to as Wang) in view of US patent No. 6,570,556 to Liao et al. (hereinafter referred to as Liao).

Additionally, the grounds of rejection to be reviewed are whether claims 3, 4, and 20 are properly rejected under 35 U.S.C. §103(a) as being unpatentable over Wang and Liao in view of US patent No. 5,638,092 to Eng et al. (hereinafter referred to as Eng).

Additionally, the grounds of rejection to be reviewed are whether claims 9, 12, 23, 26 and 29 are properly rejected under 35 U.S.C. 103(a) as being unpatentable over Wang and Liao in view of US patent No. 5,481,265 to Russell (hereinafter referred to as Russell).

## 7. ARGUMENT

### 1) *The Applicable Law*

According to *M.P.E.P.* § 2141, which cites *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986), the following tenets of patent law must be adhered to when applying 35 U.S.C. § 103. First, the claimed invention must be considered as a whole. Second, the references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination. Third, the references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention. Fourth, obviousness is determined using a reasonable expectation of success standard. Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. *M.P.E.P.* § 2141 (citing *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966)).

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *M.P.E.P.* § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)).

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Appellant's disclosure. *M.P.E.P.* § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)). The references must expressly or impliedly suggest the claimed invention or the

examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references. *M.P.E.P.* § 2142 (citing *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985)). In considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom. *M.P.E.P.* § 2144.01 (citing *In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968)). However, if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *M.P.E.P.* § 2143.01 (citing *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)).

In order to take into account the inferences which one skilled in the art would reasonably make, the examiner must ascertain what would have been obvious to one of ordinary skill in the art at the time the invention was made, and not to the inventor, a judge, a layman, those skilled in remote arts, or to geniuses in the art at hand. *M.P.E.P.* § 2141.03 (citing *Environmental Designs, Ltd. v. Union Oil Co*, 713 F.2d 693, 218 USPQ 865 (Fed. Cir. 1983), *cert. denied*, 464 U.S. 1043 (1984)).

The examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. In view of all factual information, the examiner must then make a determination whether the claimed invention "as a whole" would have been obvious at that time to that person. Knowledge of Appellant's disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the "differences," conduct the search and evaluate the "subject matter as a whole" of the invention. The tendency to resort to "hindsight" based upon Appellant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.

*M.P.E.P.* § 2141.03.

## ***2) Discussion of the rejection of claims***

### ***Rejections Under 35 USC §103 over Wang in view of Liao***

Claims 1-2, 5-8, 10-11, 13-19, 21-22, 24-25, 27-28, and 30 were rejected under 35 USC §103(a) as being unpatentable over Wang in view of Liao. Appellant respectfully traverses this rejection because the Examiner has not established a prima facie case of obviousness regarding claims 1-2, 5-8, 10-11, 13-19, 21-22, 24-25, 27-28, and 30.

### DISCUSSION OF CLAIMS 1, 2, 5, 7, 8, 10, 11, 13-16, 19, 22, 24, 25, 27, AND 28

Appellant respectfully submits the Examiner has not established a case of obviousness vis-à-vis claims 1-12 and 18-26 for at least three reasons. First, neither the references nor knowledge generally available to one of ordinary skill in the art provide any suggestion or motivation to combine Liao and Wang. The Office action asserts that Wang is combined with Liao “to increase conductivity of the pointing device.” Final Office Action at page 3, lines 3-7. However, Wang does not indicate that its device lacks conductivity or that it would benefit from increased conductivity. In fact, Wang never mentions conductivity at all. Moreover, although Liao describes using a conductor for increasing conductivity in a sensor, Liao does not explain how the increased conductivity affects its sensor’s performance. Liao merely states, “The sensor 433 consists of two electrodes 4222, 4223, a strain gauge 4221, and a conductor 4224, which increases conductivity.” (Emphasis added.) Liao at column 2, lines 65-67. Because Liao does not discuss how increasing conductivity affects its sensors, there is no teaching or suggestion in Wang that Wang’s sensors could be modified to benefit from such increased conductivity. As a result, there is no motivation for combining Wang and Liao for achieving “increase[d] conductivity of the pointing device.”

The Office action also asserts that Wang is combined with Liao “to provide an accurate movement of the cursor by providing a plurality of sensors.” Final Office Action at page 3, lines 3-7. However, Wang never mentions a deficiency in cursor movement accuracy. In contrast, Wang highlights alleged advantages of its design. Wang states, “[i]nterface device 82 is easily manipulated since the movement required by the thumb and the flexing action employ independent muscle movements which do not interfere with each other.” Wang at column 7, lines 11- 15. As for Liao, it describes a “pointing stick for use to control the cursor movement on a display device.” Although Liao’s pointing stick has a plurality of sensors, Liao does not disclose how its sensors affect cursor movement accuracy. Because Liao does not discuss how its sensors affect cursor movement accuracy, there is no teaching or suggestions in Liao that Liao’s plurality of sensors would increase Wang’s cursor accuracy. As a result, there is no motivation for combining Wang and Liao “to provide an accurate movement of the cursor by providing a plurality of sensors.”

In the Advisory Action, the Examiner contends the combination of Wang and Liao is based on a suggestion from knowledge available to one of ordinary skill in the art. See Advisory Action at page 2. However, the Examiner did not provide a reference or affidavit to show the existence of such knowledge. Therefore, Appellant submits the combination of Wang and Liao is not based on a suggestion from knowledge available to one of ordinary skill in the art.

Second, altering Wang’s device to include Liao’s sensors would render Wang’s device inoperable and unsatisfactory for its intended purpose. If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984); MPEP § 2143.01. The Office Action asserts that it would have been obvious “to include the sensors taught by Liao to replace the sensor (16) of Wang’s device.” (Emphasis added.) Final Office Action at page 3, lines 3-7. Wang teaches an interface device that may be worn on a finger. Wang at column 2, lines 3-20. Wang’s interface device includes

an internal pressure sensor and a two-dimensional force sensor. See Wang at column 4, lines 21-40. In contrast, Liao teaches a plurality of sensors disposed on a cylindrical pointing stick. Liao at column 2, lines 50-55. If the Wang's interface device were modified to work with Liao's sensors, Wang's internal pressure sensor and two-dimensional force sensor would be replaced with Liao's pointing stick sensors. However, Liao's sensors are particularly designed to work with Liao's cylindrical pointing stick. Because Wang's interface device does not include a cylindrical pointing stick, Liao's sensors would not work in Wang's interface device. As a result, there is no suggestion or motivation to make the proposed modification.

Third, the combination of Liao and Wang does not teach all the elements of each of the rejected claims. Regarding independent claim 1, the Office Action also asserts that Wang (column 5, lines 25-35) teaches the claimed "controller adapted to create position information based on activation of one or more of the plurality of sensors." The cited passage states:

The A/D converter 40 transforms the analog signals to digital signals and communicates the digital signals to a processor 42. Of course, a number of A/D converters may be utilized depending on the particular characteristics of the signals generated by the various sensors. Preferably, processor 42 is a microprocessor to provide flexibility and adaptability. However, processor 42 may also be an application specific integrated circuit (ASIC) which may be designed to utilize significantly less power than a general purpose microprocessor. Universal interface device 10 may be configured to accommodate varying levels of functionality. Wang at column 5, lines 25-35.

Appellant respectfully submits that the Office Action has mischaracterized the cited passage of Wang. As can be seen above, the cited passage does not teach or suggest a "controller adapted to create position information based on activation of one or more of the plurality of sensors."

The Office Action also asserts that Liao (column 2, line 57 to column 3, line 14) teaches the claimed “wherein each of the plurality of sensors can be activated for positioning the pointer on the display screen.” The cited passage from Liao states:

Based on the assembly requirement, the substrate 41 may be in a corresponding suitable shape. We use a T-shaped substrate in the following as an embodiment. In order to assemble the substrate 41 to the keyboard baseplate (not shown), multiple of female screws 411 are provided. A plurality of sensors 422 are formed over the circular surface of the stick 42. Liao column 2, lines 57-63.

The cited passage goes on to discuss details about the composition and layout of sensors on Liao’s cylindrical pointing stick. See Liao at column 2, line 64 to column 3, line 14. Although the cited passage describes sensors of a pointing stick, Appellant cannot find anything in the cited passage that teaches or suggests activating the sensors for positioning the pointer on a display screen, as recited in claim 1. For at least the reasons discussed above, Appellant respectfully submits that the combination of Wang and Liao does not teach or suggest each and every element of independent claim 1.

Appellant submits that claims 2, 5, 7, 8, 10, 11, 13-16, 19, 22, 24, 25, 27, and 28 are allowable for at least the reasons discussed above.

#### DISCUSSION OF CLAIMS 6 AND 18

Claim 6 recites, “the controller is to translate a signal from the sensor unit to the position information, and wherein the transmitter is to transmit the position information.” Claim 18 recites a similar feature. In rejecting these claims, the Final Office Action points to Wang’s Figure 3 and the passage at column 5, lines 18-50. See Final Office Action at page 3. However, Appellant cannot find the above-quoted claim feature in either the cited passage or Figure 3. As such, Appellant submits the combination of Wang and Liao does not teach or suggest each and

every element of claim 6. Appellant also submits the combination of Wang and Liao is improper for the reasons discussed above vis-à-vis claim 1.

#### DISCUSSION OF CLAIMS 7, 17, 21, 30

Claim 7 recites, "the movement information contains relative position information regarding the pointer displayed on the display screen." In rejecting claim 7, the Final Office Action asserts this claim feature is inherently taught in Wang. In particular the Final Office Action states, "Wang teaches that the pointing device (12) can be used as a mouse (abstract), which inherently means that the device control [sic] a pointer on a display."

Applicant submits that the fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. In re Rijckaert, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993); In re Oelrich, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' " In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted.)

However, even if this statement were true (although it is not), the Final Office Action has not shown that this claim feature is taught or suggested by Wang and Liao.

Claims 17, 21, and 30 include features similar those quoted above. As such, Appellant respectfully submits that claims 17, 21, and 30 are allowable for the same reasons as discussed above vis-à-vis claim 7. Furthermore, these claims are allowable because there is no suggestion or motivation to combine Wang and Liao, as discussed above.

Rejections Under 35 USC §103 over Wang and Liao in view of Eng



Claims 3-4 and 20 were rejected under 35 USC § 103(a) as being unpatentable over Wang and Liao in view of Eng (U.S. 5,638,092). Dependent claims 3-4 and 20 each depend, directly or indirectly on one of dependent claims 1 or 18. Therefore, they include all the features of the claims on which they depend. As noted above, the combination of Wang and Liao does not teach or suggest each and every element of independent claims 1 and 18. For the combination of Wang, Liao, and Eng to teach or suggest each and every element of dependent claims 3, 4, and 20, Eng must teach what Wang and Liao are missing. Appellant respectfully submits that Eng does not teach or suggest what Wang and Liao are missing (see discussion of independent claim 1 above). As such, Appellant respectfully submits that the combination of Wang, Liao, and Eng does not teach or suggest each and every element of dependent claims 3, 4, and 20. Furthermore, these claims are allowable because there is no suggestion or motivation to combine Wang and Liao, as discussed above.

*Rejections Under 35 USC §103 over Wang and Liao in view of Eng*

Claims 9, 12, 23, 26, and 29 were rejected under 35 USC § 103(a) as being unpatentable over Wang and Liao in view of Russell (U.S. 5,481,265). Dependent claims 9, 12, 23, 26, and 29 each depend, directly or indirectly on one of dependent claims 1, 18, or 27. Therefore, these include all the features of the claims from which they depend. As noted above, the combination of Wang and Liao does not teach or suggest each and every element of independent claims 1, 18, and 27. For the combination of Wang, Liao, and Russell to teach or suggest each and every element of dependent claims 3, 4 and 20, Russell must provide what Wang and Liao are missing. Appellant respectfully submits that Russell does not teach or suggest what Wang and Liao are missing (see discussion of independent claims above). As such, Appellant respectfully submits the combination of Wang, Liao, and Russell does not teach or suggest each and every element of dependent claims 9, 12, 23, 26, and 29.

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8. SUMMARY

Appellant respectfully submits the claimed invention is patentable over the cited art.

Reversal of the claim rejections is respectfully requested.

Respectfully submitted,

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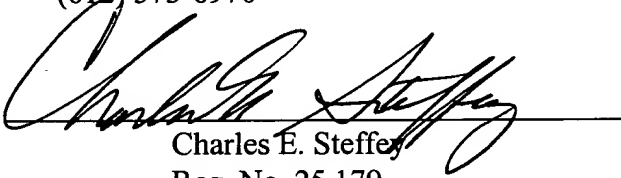
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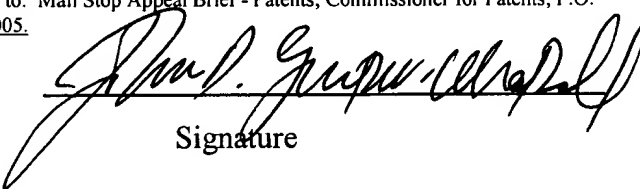
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 23rd day of May, 2005.

John D. Gustav-Wrathell

Name



Signature

### **CLAIMS APPENDIX**

1. (Previously Presented) A pointing device for controlling a pointer displayed on a display screen, comprising:
  - a ring;
  - a sensor unit comprising a plurality of sensors in a substantially circular pattern, wherein the sensor unit is mounted on the ring, and wherein each of the plurality of sensors can be activated for positioning the pointer on the display screen; and
  - a controller adapted to create position information based on activation of one or more of the plurality of sensors.
2. (Original) The pointing device of claim 1, wherein the ring is of a size that is capable of being worn on a human digit.
3. (Original) The pointing device of claim 1, further comprising:
  - at least one selection button mounted on the ring.
4. (Original) The pointing device of claim 1, wherein the at least one selection button is capable of being operated by a human thumb.
5. (Original) The pointing device of claim 1, wherein the sensor unit is capable of being operated by a human thumb.
6. (Previously Presented) The pointing device of claim 1, further comprising:
  - a transmitter mounted to the ring, wherein the transmitter is coupled to the controller, and

wherein the controller is coupled to the sensor unit, and wherein the controller is to translate a signal from the sensor unit to the position information, and wherein the transmitter is to transmit the position information.

7. (Previously Presented) The pointing device of claim 6, wherein the movement information contains relative position information regarding the pointer displayed on the display screen.

8. (Original) The pointing device of claim 1, wherein the plurality of sensors comprises pressure sensors.

9. (Original) The pointing device of claim 1, wherein the plurality of sensors comprises rocker switches.

10. (Original) The pointing device of claim 1, wherein the plurality of sensors comprises capacitance proximity sensors.

11. (Original) The pointing device of claim 1, wherein the plurality of sensors comprises inductive proximity sensors.

12. (Original) The pointing device of claim 6, wherein the transmitter comprises an infrared transmitter to transmit light pulses encoding the movement information.

13. (Previously Presented) A method for moving a pointer on a display, comprising:  
detecting activation of one of a plurality of sensors arranged in a substantially circular pattern on a sensor unit, wherein the sensor unit is mounted on a ring, and wherein each of the

plurality of sensors can be activated for moving the pointer on the display; and  
creating position information for the pointer based on which one of the plurality of  
sensors was activated.

14. (Original) The method of claim 13, wherein the ring is of a size capable of being worn  
on a human finger.

15. (Original) The method of claim 13, wherein the sensor unit is capable of being operated  
by a human thumb.

16. (Original) The method of claim 13, further comprising:  
transmitting the position information.

17. (Original) The method of claim 13, wherein the position information contains relative  
position information regarding the pointer on the display.

18. (Previously Presented) A computer system, comprising:  
a receiver; and  
a pointing device, comprising,  
a ring;  
a sensor unit mounted to the ring, wherein the sensor unit comprises a plurality of  
sensors in a substantially circular pattern, and wherein each of the plurality of sensors  
receives input for moving a pointer on a display screen;  
a controller mounted on the ring, wherein the controller is coupled to the sensor  
unit; and  
a transmitter mounted to the ring, wherein the transmitter is coupled to the

controller, and wherein the controller is to translate a signal from the sensor unit into movement information, and wherein the transmitter is to transmit the movement information to the receiver.

19. (Original) The computer system of claim 18, wherein the ring is of a size that is capable of being worn on a human finger.

20. (Original) The computer system of claim 18, further comprising:  
at least one selection button mounted on the ring.

21. (Previously Presented) The computer system of claim 18, wherein the movement information contains relative position information regarding the pointer on the display.

22. (Original) The computer system of claim 18, wherein the plurality of sensors comprises pressure sensors.

23. (Original) The computer system of claim 18, wherein the plurality of sensors comprises rocker switches.

24. (Original) The computer system of claim 18, wherein the plurality of sensors comprises capacitance proximity sensors.

25. (Original) The computer system of claim 18, wherein the plurality of sensors comprises inductive proximity sensors.

26. (Original) The computer system of claim 18, wherein the transmitter comprises an

infrared transmitter that transmits light pulses containing the movement information.

27. (Previously Presented) A program product comprising signal-bearing media bearing instructions, which when read and executed by a processor perform operations comprising:

detecting activation of one of a plurality of sensors arranged in a substantially circular pattern on a sensor unit, wherein the sensor unit is mounted on a ring, and wherein each of the plurality of sensors receives input for moving a pointer on a display screen; and

creating position information for the pointer on the display screen based on which one of the plurality of sensors was activated.

28. (Original) The program product of claim 27, wherein the ring is of a size capable of being worn on a human finger.

29. (Original) The program product of claim 27, further comprising:  
transmitting the position information from an infrared transmitter.

30. (Original) The program product of claim 27, wherein the position information contains relative position information regarding the pointer on the display.

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**EVIDENCE APPENDIX**

None.



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**RELATED PROCEEDINGS APPENDIX**

No Related Proceedings are known to the Appellants' Representative.